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Northeastern Area State & Private Forestry

P-70-3

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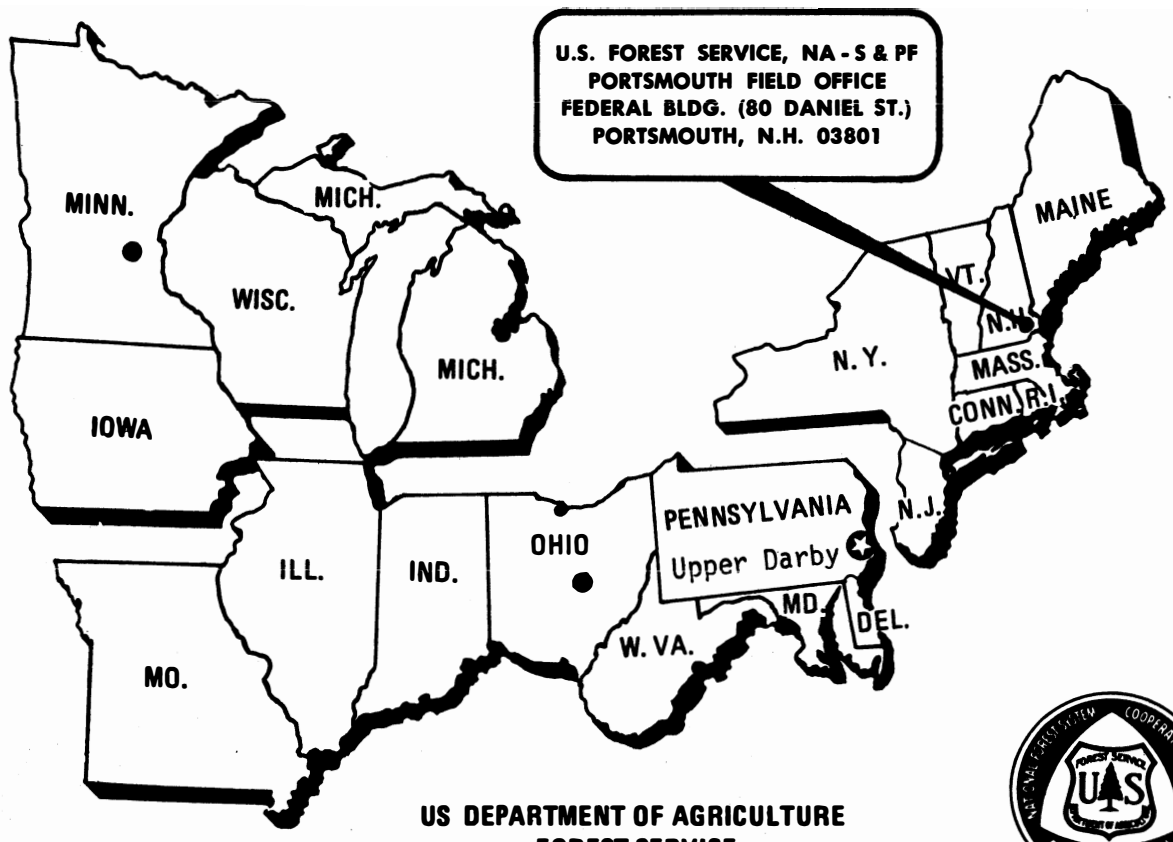
Forest Insect and Disease Conditions in New England, New York, and New Jersey 1970



US DEPARTMENT OF AGRICULTURE
FOREST SERVICE

FOREST INSECT AND DISEASE CONDITIONS IN NEW ENGLAND, NEW YORK, AND NEW JERSEY 1970

Compiled by

U.S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE
NORTHEASTERN AREA, STATE AND PRIVATE FORESTRY
PORTSMOUTH FPC FIELD OFFICE, PORTSMOUTH NEW HAMPSHIRE 1/

NOVEMBER 1970

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ABSTRACT

Gypsy moth, saddled prominent caterpillar, and the spruce budworm defoliated nearly a million acres of woodland in 1970. Extensive suppression projects were carried out in New Jersey and New York on the gypsy moth, the acreage amount to 210,000 acres. In Maine 210,000 acres of spruce budworm infestation was treated. Suppression projects planned for 1971 involving these same insects may exceed 500,000.

Hundreds of thousands of acres of hardwoods were defoliated by the oak leaf skeletonizer, maple trumpet skeletonizer, and the saddled prominent caterpillar. Defoliation was so noticeable that many newspaper articles were written some of which generated more heat then light.

The Dutch elm disease created havoc with elms throughout the northeastern states this year, thousands of them dying from the disease.

ARBORVITAE LEAF MINER - Argyresthia thuiella (Pack.)

Summary: Considerable tree mortality caused by four years of heavy defoliation of northern white cedar throughout Vermont. A very heavy infestation of the insect persists in Maine for the second consecutive year.

Trend: High populations are expected to continue and tree mortality will increase.

Suppression: Maine is continuing to test Malathion against the early larval states, so far, results have been erratic. Timing is apparently very critical if successful control is to result.

BALSAM WOOLLY APHID - Chermes piceae Ratz.

Summary: Still a major problem along the Maine coast. An infestation in Greenville, Maine is still causing tree mortality The insect appears to be moving northward in western Maine. Vermont has scattered mortality of balsam fir over 14,000 acres and losses are increasing slightly. New Hampshire populations are on a decline.

Trend: Increasing slightly in Maine & Vermont; decreasing populations in New Hampshire.

Suppression: None

BEECH BARK DISEASE - Cryptococcus fagi (Baer)

Summary: The killing front of this insect-disease complex continues to move into northern Vermont and the Taconic Range in the southwest part of the state. Beech mortality is increasing in severity on greatly expanded areas. The disease continues to spread throughout western Massachusetts and northeastern New York with tree mortality very much in evidence in some localities.

Trend: Static in New Hampshire and Maine but increasing greatly in Vermont, New York, and Massachusetts.

Suppression: None. Salvage of beech is continuing but tree mortality is occuring faster than salvage.

BIRCH CASEBEARER - Coleophora fuscedinella (Zell.)

Summary: Noticeable evidence of this insect throughout Maine but not in outbreak proportions. Malathion treated trees appeared to be in good condition when compared to untreated individuals.

Trend: Static at low levels.

Suppression: None anticipated.

BIRCH LEAF MINER - Fenusa pusilla (Lep.)

Summary: Light populations in scattered stands throughout Vermont and New Hampshire. Ornamental birches throughout Vermont were noticeably brown as a result of larval activity.

Trend: Static at low levels.

Suppression: None planned.

ELM SPANWORM - Ennomos subsignarius (Hbn.)

Summary: This insect, also known as the Snow-White Linden Moth defoliated approximately 40,000 acres of hardwoods (elm, basswood, red maple) in Connecticut and Massachusetts. Many municipalities were inundated with myriads of moths in June and July resulting in a flurry of newspaper articles.

Trend: Static at high levels.

Suppression: None.

FALL CANKERWORM - Alsophila pometaria (Harr.)
SPRING CANKERWORM - Paleacrita vernata (Peck)

Summary: Infestation collapsed in central Vermont but scattered light infestations persist elsewhere in the state. Populations decreased in Maine with the exception of about 1000 acres near Bristol. In New Jersey, the fall cankerworm was intermingled with gypsy moth on about 100,000 acres much of which was treated with Carbaryl.

Trend: Downward but with local "hot spots."

Suppression: Approximately 80,000 acres treated for cankerworms and gypsy moth in 1970. Tentative plans call for the treatment of 100,000 acres with Carbaryl in 1971 to control gypsy moth and cankerworms.

GYPSY MOTH - Porthetria dispar (Linn.)

Summary: A general outbreak is currently present throughout the area: Connecticut, 385,000 Massachusetts, 14,000 acres; New Hampshire 60,000 acres; New Jersey, 300,000 acres; New York, 430,000 acres; Maine 10,000 acres.

Trend: Upward and at high levels throughout the area.

Suppression: Most suppression work in 1970 was confined to high value timber and recreation areas. Carbaryl was used at a dosage of 1 pound per acre in 1 or 2 gallons of water. New York treated 110,000 acres and New Jersey treated approximately 100,000 acres; New York may treat 330,000 acres in 1971. Connecticut has no definite spray proposals at this time.

HEMLOCK LOOPER - Lambdina athasaria athasaria (Wlkr.)

Summary: A severe infestation of this insect on the New Bedford, Mass. watershed resulted in some tree mortality. Several hundred acres are involved.

Trend: Upward.

Suppression: City of New Bedford will treat the infested acres using ULV Malathion - applying it by helicopter.

LARCH SAWFLY - Pristophora erichsonii (Hartig.)

Summary: Continues to be a problem in larch plantations in New York.

Trend: Static at high population levels.

Suppression: The U.S.F.S. treated one hundred acres of larch in Hector Land Use Area in New York. Malathion ULV was applied at a rate of 13 fluid ounces per acre by fixed wing aircraft. Excellent control was achieved - 99% or more of the larvae were killed. The state of New York may treat some larch plantations in 1971.

MAPLE BARK SCALE - Cryptococcus williamsi (K.&H.)

Summary: Infestations of this insect continue to decline. No evidence of physiological stress is apparent on heavily attacked sugar maples. The insect was found for the first time in Massachusetts in the vicinity of Mt. Holyoke.

Trend: Continued decline.

Suppression: None.

MAPLE TRUMPET SKELETONIZER - Epinotia aceriella (Clemens)

Summary: This insect was in outbreak throughout the entire area served by the Portsmouth Field Office - namely New England, New Jersey, and New York. Maples were the principal hosts although some larval feeding was noticeable on beech and red oak. No apparent damage to hosts.

Trend: Populations will probably continue at a high level.

Suppression: None.

MAPLE LEAF CUTTER - Paracelemensia acerifoliella

Summary: Populations in northern Vermont are declining but increasing in the southern part of the state. Many sugar maples in southern Vermont appear to be under stress as evidenced by reduction in the size of the leaves.

Trend: Generally static in Vermont except for the southern part of the state where it is increasing.

Suppression: None.

NANTUCKET PINE TIP MOTH - Rhyacionia frustrana (Comstock)

Summary: This insect had extremely high populations all over Cape Cod, Mass., and in the vicinity of Ft. Dix, N.J. in 1969. This year the Cape Cod populations appear to be collapsing; the New Jersey population remains high.

Trend: Downward in Massachusetts; static at high levels in New Jersey.

Suppression: About 100 acres of pitch pine plantations were treated at Fort Dix, N.J. using Dimethoate applied by mist blower. The first generation of moths was apparently reduced substantially. Additional informatio on height growth stimulation will be collected.

OAK LEAF TIER - Croesia semipurpurana (Kear.)
FRUIT TREE LEAF ROLLER - Archips argyrospila (Wlkr.)

Summary: This complex of insects continues to be a problem in New Jersey defoliatin in excess of 100,000 acres. They are frequently associated with canker worms and gypsy moth.

Trend: A gradual decline.

Suppression: Some 40,000 acres were treated this year using Carbaryl; however, gypsy moth was also a target insect in these same areas. Plans for 1971 call for treating 40,000 acres in the vicinity of Wachung, N.J.

OAK LEAF SKELETONIZER - Bucculatrix ainsliella (Murt.)

Summary: This insect was in outbreak numbers throughout the entire eight state area. Both generations of this pest were extremely numerous this year causing nearly complete skeletonizing of leaves on most oak species. Many newspaper articles were generated by this pest in 1970. Infestations cover hundreds of thousands of acres.

Trend: Downward in many areas because many second generation larvae failed to pupate.

Suppression: None carried out and none anticipated

PINE LOOPER - Lambdina athasaria pellucidaria (G.&R.)

Summary: After a hiatus of several years this insect is again reaching outbreak proportions on Cape Cod., Mass., and at Oyster Bay, Long Island, N.Y. On Cape Cod 11,000 acres of infestation were visible from the air. The extent of the infestation on Long Island has not been determined. Many pitch pines in both areas appear very shabby.

Trend: Continuing upward and possible increasing in expanse in 1971.

Suppression: None planned.

SADDLED PROMINENT - Heterocampa guttivitta (Walker)

Summary: This defoliator was a major pest throughout New England and New York in 1970. New York reported 89,000 acres; Vermont, 136,000 acres; Massachusetts, 125,000 acres; Maine 12,000 acres; New Hampshire 480,000 acres. Some twig killing on maples was evident in some areas. Pupal survey methods are still being tested and host damage studies were initiated.

Trend: Downward in New York; upward in other states, but population collapse is expected in areas where insect has been at outbreak levels for 2-3 years.

Suppression: New York cancelled much of its spray program because of population collapse. None anticipated anywhere in 1971.

SATIN MOTH - Stilpnotia salicis (Linn.)

Summary: Defoliation of aspen by this insect was wide spread in and around Millinocket, Maine., and appears to be spreading northward. Little direct tree mortality has been evident because of defoliation but it is suspected that it is weakening many trees.

Trend: Static at moderate levels but encompassing larger areas.

Suppression: None planned.

SPRUCE BUDWORM - Choristoneura fumiferana (Clem.)

Summary: An infestation still persists in the Oxbow area in Aroostook County, Maine and a new infestation is building up in the Cross Lake - Madawaska Lake area of the same county.

Trend: Static at high population levels in the Oxbow area and increasing in the Cross Lake area. Egg mass counts are high in both of these areas.

Suppression: About 210,000 acres of fir spruce type were sprayed in the Oxbow area in 1970 using Fenitrothion (Accothion) at a dosage rate of 2 ounces/acre - 2 applications. Satisfactory population reduction was not achieved; foliage preservation was adequate. A pilot test of some material maybe conducted in 1971, but no operational project is planned.

WHITE PINE WEEVIL - Pissodes strobi (Peck.)

Summary: Weevil populations in Maine are very erratic but in Vermont populations are maintaining high levels. In Vermont the insect is becoming of increasing importance as a Christmas tree pest in spruce and scots pine.

Trend: Upward in Vermont; static in New Hampshire, unknown in Maine.

Suppression: Pilot tests in Maine using Metasystox (R) indicate considerable effectiveness when applied with a hydraulic sprayer. Helicopter and mist blower applications of the same material were not effective.

DISEASES

AIR POLLUTION

Summary: The effects of air pollutants are becoming increasingly noticeable on white pines throughout the area served by the Portsmouth Field Office. Pines in areas far removed from pollution sources are being affected. Maine has been actively evaluating air pollution throughout the state. A cooperative evaluation of air pollution damage on white pine is being planned by New Hampshire and the Portsmouth Field Office. No evaluation has been made on other tree species.

Trend: Increasing throughout the area.

ANNOSUS ROOT ROT - Fomes annosus (Fr.) Cke.

Summary: Localized severe mortality is continuing in untreated conifer stands in New York, Connecticut, and Rhode Island. Spruce plantations in Rhode Island have suffered considerable mortality and blowdown. The long term value of stump treatments were demonstrated in a recent New England wide survey conducted by the Portsmouth Field Office.

Trend: Mortality will be increasing in plantations which do not receive stump treatments.

ANTHRACNOSE:

Summary: Very heavy infections were observed on the eastern end of Long Island. Several thousand acres of forests were defoliated.

SCLERODERRIS CANKER - Scleroderris lagerbergii Gremmen

Summary: New infections have been found in the Lake Saranac region of New York. One infection was found in a Scotch pine plantation - a first for New York. Mortality is quite light. Surveillance throughout New England has not revealed the presence

of this disease in this six state region.

Trend: Unknown

ROADSIDE MAPLE DECLINE:

Summary: Roadside maples throughout the area continue to decline as a result of salt application, road widening and possible air pollution damage. This problem is becoming very noticeable in many small New England towns where sugar maples were often the only trees planted. Research being conducted at the University of New Hampshire should provide information on trees more adaptable to roadside planting.

Trend: Increasing largely because of heavy winter salt application.

WHITE PINE BLISTER RUST - Cronartium ribicola (Fischer)

Summary: Maine, New Hampshire, Vermont and New York participated in the Ribes Radication Effectiveness Survey. Major administrative changes are underway in several states in an effort to put the program on a sound economic basis. Low pruning plots established in New York and yielding very promising results.

DUTCH ELM DISEASE - Ceratocystis ulmi (Buism) C. Moreau

Summary: Tremendous numbers of elms continue to die throughout the entire area. Sanitation, the only presently reliable control is considered too costly by many municipalities Removal of gigantic elms is also costly.

Trend: Increasing

ASH LEAF RUST Puccinia sparagonoides Ell. & Barth

Summary: This rust which has marsh cord grasses as alternate hosts was noticeable along the New Hampshire and Maine coasts. Damage is slight.

Trend: Unknown

CHESTNUT BLIGHT *Endothia parasitica* (Murr.) A.+A.

Summary: Although chestnut is no longer present as a commercial species interest remains very high. This is caused in part because of the sprouts often reach considerable size, leading people to believe the trees are resistent to cankering. Almost invariably these trees die. A chestnut in Maine over 20" DBH recently became infected.

APPENDIX

The following individuals provided the information used in this report:

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